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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,480	06/27/2001	Zhimin He	STL9799	5930

7590 06/19/2003

Derek J. Berger
Seagate Technology LLC
Intellectual Property - COL2LGL
389 Disc Drive
Longmont, CO 80503

EXAMINER

CASTRO, ANGEL A

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 06/19/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.



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Office Action Summary

Application No.

09/894,480

Applicant(s)

HE ET AL.

Examiner

Angel A. Castro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8, 10-15, 17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 2, 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to Amendment A filed on 3/27/2003.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 5-6, 8, 10, 12-13, 15, 17, 19-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Heath (U.S. Pat. 6,205,005).

Regarding claims 1 and 8, Heath shows a disc drive (figures 1-6, 17-18) comprising:

a housing 1 having a first component;

an actuator 9 having a cavity 33; and

a pivot 30 comprising:

a first member 31 positioned within the cavity and coupled to the actuator, the first member having at least one external surface;

a second member 4 mounted to the first housing component; and

at least two leaves 7, 21, each leaf joining one of the external surfaces to the second member, wherein the leaves are transversely disposed at an angle to one another such that the actuator is pivotable with respect to the housing about an axis.

Regarding claim 15, Heath shows a disc drive (figure 17) comprising a base 1; an actuator 9 configured for rotation relative to the base about an axis of rotation; and means 30 (figure 18) for pivotably coupling the actuator to the base.

Regarding claims 3 and 10, Heath shows that the cavity further comprises a first recess (a hole in the actuator arm 9 to accept screw 39) shaped to locate the first member.

Regarding claims 5, 12 and 17, it is inherent in the reference that the center of rotation generally coincides with the center of mass of the actuator.

Regarding claims 6 and 13, Heath shows that each of the external surfaces is inclined towards the center of rotation (see figure 2).

Regarding claim 19, Heath shows that the coupling means comprises a mounting element 4 fixed to the base (see figure 17).

Regarding claim 20, Heath shows that the coupling means comprises a mounting element 31 fixed to the actuator within the cavity (see figure 17).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

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person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heath in view of Rao and further in view of Puro (U.S. Pat. 4,478,532).

Regarding claims 4 and 11, Heath discloses the pivot described above. Heath does not specifically disclose a pair of washers secured to each one of the leaves, the washers of each pair being spaced apart by substantially a same distance. Rao discloses a pivot comprising a pair of screws secured to each one of the leaves, the screws of each pair being spaced apart by substantially a same distance (see figure 3e, and column 6, lines 17-22). Puro shows the desirability of using washers with screws (washer 48 in figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the pivot of Heath with the screws and washers as taught by Rao and Puro.

One of ordinary skill in the art would have been motivated to the pivot of Heath with the screws and washers as taught by Rao and Puro as doing this would provide a snug and secure fit between the screw and the leaves.

5. Claims 5-6 and 12-13, 17 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Heath as applied to claims 5-6 and 12-13 above, in view of Ottesen et al (U.S. Pat. 5,267,110).

Assuming *arguendo*, that Heath did not disclose that the center of rotation coincides with the center of mass of the actuator. Ottensen et al discloses an actuator with a pivot having the center of rotation coincident with the center of mass with the purpose of reducing track misregistration errors. It would have been obvious to one of ordinary skill in the art at the time

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the invention was made to provide the actuator of Heath having the center of rotation coincident with the center of mass of the actuator in view of the teaching of Ottesen et al.

One of ordinary skill in the art would have been motivated to provide the actuator and pivot of Heath having the center of rotation coincident with the center of mass as doing this would reduce track misregistration errors.

6. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heath in view of Chin et al.

Regarding claims 7 and 14, Heath does not specifically disclose that the housing comprise a second component, the second member being coupled to the second housing component. Chin et al shows a bearingless pivot cartridge where the housing includes a second component 13 (figure 3) where the pivot is coupled. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the actuator of Heath with a second housing component as taught by Chin et al.

The rationale is as follows: One of ordinary skill in the art would have been motivated to provide the actuator of Heath with a second housing component as taught by Chin et al as doing this would allow assembling the actuator and pivot separately and incorporating into the disk drive thus saving time and avoid bending the actuator.

Allowable Subject Matter

7. Claims 2 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to claims 1-15, 17 and 19-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ichihara (U.S. Pat. 5,432,663) discloses a head positioner having pivotable members; Rohart (U.S. Pat. 4,751,596) discloses an arrangement of magnetic recording and/or readout heads.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel A. Castro whose telephone number is 703-308-8435.

The examiner can normally be reached on Monday through Thursday, 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on 703-305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-6037 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Angel Castro, Ph.D.
June 2, 2003


THANG V. TRAN
PRIMARY EXAMINER